



## UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/738,927	12/13/2000	Robin R. Miles	IL-10404	1809

7590 01/22/2004

Alan H. Thompson  
Assistant Laboratory Counsel  
Lawrence Livermore National Laboratory  
P.O. Box 808, L-703  
Livermore, CA 94551

EXAMINER

DIAMOND, ALAN D

ART UNIT

PAPER NUMBER

1753

DATE MAILED: 01/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/738,927

Applicant(s)

MILES, ROBIN R

Examiner

Alan Diamond

Art Unit

1753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 08 December 2003.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other \_\_\_\_\_

## DETAILED ACTION

### *Comments*

1. The Drawings filed December 8, 2003 have overcome the objection to the drawings.
2. The objection to claims 5 and 7 because of informalities has been overcome by Applicant's amendment of the claims.
3. The rejection of claim 5 under 35 USC 112, second paragraph, has been overcome by Applicant's amendment thereof.
4. The 35 USC 102 rejection of claims 8 and 9 over Milner et al has been overcome by Applicant's amendment of claim 8 so as to require the recited fluidic channel, said fluidic channel having a surface, at least one pair of interdigitated electrodes positioned on said surface of said fluidic channel with a space between said interdigitated electrodes, said at least one pair of interdigitated electrodes localized along said fluidic channel, with said at least one pair being located on the same surface of said fluidic channel, said interdigitated electrodes having electrode plates with a surface.
5. The rejections over Van Gerwen et al have been overcome by Applicant's amendment of claims 1 and 8 so as to require the recited fluidic channel, said fluidic channel having a surface, at least one pair of interdigitated electrodes positioned on said surface of said fluidic channel with a space between said interdigitated electrodes, said at least one pair of interdigitated electrodes localized along said fluidic channel, with said at least one pair being located on the same surface of said fluidic channel, said interdigitated electrodes having electrode plates with a surface.

***Claim Objections***

6. Claim 11 is objected to because of the following informalities: In claim 11, at each of lines 3 and 5, the word "on" should be changed to "one". Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claims 1-11 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In claim 1, at lines 11-13, the newly added recitation that "antibodies immobilized on said surface of said electrode plates and immobilized in said space between said interdigitated electrodes, wherein said pathogens carried by said fluid attach to said immobilized antibodies" is not supported by the specification, as originally filed. The same applies to dependent claims 2-7. It is suggested that lines 11-13 be deleted from claim 1.

In claim 8, at lines 12-14, the newly added recitation that "antibodies immobilized on said surface of said electrode plates and immobilized in said space between said interdigitated electrodes, wherein said pathogens carried by said fluid attach to said

immobilized antibodies" is not supported by the specification, as originally filed. The same applies to dependent claims 9-11. It is suggested that lines 12-14 be deleted from claim 8.

***Claim Rejections - 35 USC § 112***

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 1-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, at line 14, the term "across electrode plates" should be changed to "across said electrode plates" because there are now previously defined electrode plates in claim 1. The same applies to dependent claims 2-7.

Claim 8 is now indefinite because the term "said pathogens" at line 3 and bridging lines 13 and 14 lack positive antecedent support in claim 8 itself. It is suggested that "pathogens" at line 3 be changed to "particles". As noted above in the instant Office action, lines 12-14 of claim 8 should be deleted. The same applies to dependent claims 9-11.

Claim 8 is also now indefinite because it is not clear what is meant by "the said" at 17. It is suggested that "the" be deleted from line 17. The same applies to dependent claims 9-11.

Claim 10 is now confusing because the limitation "wherein said electrodes comprise plates of interdigitated electrodes" at lines 1-2 is already present in parent

Art Unit: 1753

claim 8 due to the fact that claim 8 has been amended so as to recite that the interdigitated electrodes have plates. It is suggested that the term "wherein said electrodes comprise plates of interdigitated electrodes and" be deleted from lines 1-2 of claim 10.

### ***Double Patenting***

11. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

12. Claims 1-11 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 10-28 of copending Application No. 09/737,542. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of said copending application further include antibodies on the spaced electrodes. However, the presence of such antibodies are not excluded by the comprising language of the instant claims.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

13. Claims 1-11 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-9 of copending Application No. 09/993,870. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of said copending application further include antibodies on the spaced electrodes. However, the presence of such antibodies are not excluded by the comprising language of the instant claims.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

14. Claims 1-11 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over all of the claims of copending Application No. 09/738,461. Although the conflicting claims are not identical, they are not patentably distinct from each other because the ionic label that is trapped in the electric field of the claims of said copending application is not excluded by the comprising language of the instant claims.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

#### ***Response to Arguments***

15. Applicant's arguments filed December 8, 2003 have been fully considered but they are not persuasive.

With respect to all of the above provisional obviousness-type double patenting rejections, Applicant states that he will await further official action. It is the Examiner's

Art Unit: 1753

position that said provisional obviousness-type double patenting rejections are proper and therefore have been maintained.

### ***Conclusion***

16. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alan Diamond whose telephone number is 571-272-1338. The examiner can normally be reached on Monday through Friday, 5:30 a.m. to 2:00 p.m. ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on 571-272-1342. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.



Art Unit: 1753

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

A handwritten signature in black ink, appearing to read "Alan Diamond", with a stylized flourish at the end.

Alan Diamond  
Primary Examiner  
Art Unit 1753

Alan Diamond  
January 15, 2004